

an inlet to receive hydrogen and oxygen;

an outlet to expel water;

a passage formed in the reactor, wherein the inlet is disposed at one end of the passage and the outlet is disposed at another end of the passage so that the hydrogen and oxygen flows through the inlet and into the passage;

C11 a reactor body made of a heat-resistant metal, the reactor body comprising a first reactor body member welded to a second reactor body member, wherein the inlet and the outlet are mounted on the reactor body, the outlet is a water and moisture gas take-out joint, the passage is an internal space defined by recesses inside the reactor body, and the recesses include a first spherical recess having a first surface and a second spherical recess having a second surface; and

a platinum coating film is disposed only on the surface of the first recess, wherein when the hydrogen and oxygen supplied by the inlet and diffused by the gas diffusing member contact the platinum coating film, water is generated by a reaction between the hydrogen and the oxygen.

56. ~~(Canceled)~~

C12 58. (Amended) A water-generating reactor as recited in claim 47, wherein the reactor body is made from heat-resistant metal, and the platinum coating film is 10Å to 0.5 mm thick and is formed by a method selected from the group consisting of a plating method, a sputtering method, a vapor deposition method, a cladding method, an ion plating method and a hot press method.

59. (Amended) A water-generating reactor as recited in claim 47, wherein the reactor body is made from heat-resistant metal, and the platinum coating film is a film 10Å to 0.5 mm thick formed on a barrier film of a non-metal material that is disposed on the surface of the first recess of the reactor body by one of a plating method, a sputtering method, a vapor deposition method, a cladding method, an ion plating method, or a hot press method.

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cont. 60. (Amended) A water-generating reactor as recited in claim 47, wherein when gas is supplied to the reactor body, the gas is an oxygen rich gas having a ratio of oxygen to hydrogen that is $< \frac{1}{2}$, or a hydrogen rich gas having a ratio of oxygen to hydrogen that is $> \frac{1}{2}$.

65. (Not amended) A water-generating reactor as recited in claim 59, wherein the barrier film is made of at least one material selected from the group consisting of TiN, TiC, TiCN, and TiAlN.

C13 81. (NEW) A water-generating reactor as recited in claim 47, further comprising a first reflector plate disposed within the passage and at the inlet, and a second reflector plate disposed within the passage and at the outlet.

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82. (NEW) A water-generating reactor as recited in claim 81, further comprising a filter in a filter retainer disposed in the passage, wherein the filter and the filter retainer are disposed between the first reflector plate and the second reflector plate.

83. (NEW) A water-generating reactor as recited in claim 47, wherein the platinum coating film is disposed only on the surface of the first recess, wherein the first recess is formed in the first reactor body member located at the outlet side of the passage.
